

## **Fintech Forward 2019: Exploring the Unwritten Future**



I am pleased to welcome you to the 2<sup>nd</sup> annual CFTC Fintech Forward conference: “Exploring the Unwritten Future.”

Fintech holds tremendous promise for the economy. I hope at this conference to showcase the CFTC’s commitment to facilitating innovation. It is critical for the United States to be a leader in the realm of fintech and innovation more broadly. By maintaining our leadership, we can help establish the rules that will allow our markets to thrive.

While today’s agenda highlights the promise of fintech innovation for our markets, we will not shy away from discussing the challenges that innovators and regulators face. For the CFTC, we must find a way to embrace innovation in a thoughtful way while ensuring the resiliency and integrity of our markets. I believe that CFTC can leverage its heritage of principles-based regulation to address fintech innovations.

For today’s conference, we have convened leading innovators, regulators, market-participants, and thought leaders. We will examine the impact of innovations on our derivatives markets, including artificial intelligence, digitization and custody, big data, and cloud computing.

We are also thrilled to host over 90 international regulators this week as part of the International Regulators Conference (IRC), held annually by our Office of International Affairs. The inclusion of Fintech Forward in the IRC program highlights the importance of cooperation among regulators on issues of both the integrity of global markets and fintech innovation. Some of our international colleagues will participate in a panel on approaches to fintech and market developments in various jurisdictions.

Thank you for taking the time to spend your day with us, and I look forward to continuing the dialogue with you.



Heath P. Tarbert  
Chairman and Chief Executive



### **Fintech Forward**

Fintech Forward is an annual conference hosted by the CFTC and dedicated to examining fintech issues on the horizon. Fintech Forward is spearheaded by LabCFTC with support from the Office of Customer Education and Outreach. Launched in 2018, Fintech Forward convenes leading innovators, regulators, market participants, and the general public to discuss the latest in fintech developments and the impact of these emerging technologies on the CFTC's markets and customers. Fintech Forward is a free event open to the public.

### **LabCFTC**

Launched in May 2017, LabCFTC is the initiative aimed at facilitating market-enhancing fintech innovation, informing policy, and ensuring that the CFTC has the regulatory and technological tools and understanding to keep pace with changing markets. It is the agency's focal point to engage with fintech innovation and promote fair competition by making the CFTC more accessible to fintech innovators. More information can be found at <https://www.cftc.gov/LabCFTC/>.

### **Office of Customer Education and Outreach**

The CFTC's Office of Customer Education and Outreach develops and implements education initiatives designed to help customers protect themselves against fraud and other violations of the Commodity Exchange Act. It has played an integral role in both authoring public education materials and working with partners to spread the word about topics such as digital assets. The CFTC's informational materials on digital assets can be found at <https://www.cftc.gov/Bitcoin/>.



**Meet the Regulators Exhibit**

Fintech Forward 2019 features a “Meet the Regulators” exhibit. Attendees will have the opportunity to engage with regulators about their respective jurisdictions, innovation engagement initiatives, and other fintech topics.

The Meet the Regulators exhibit will be open exclusively during program registration from 8:00 – 9:30 a.m. and again during lunch, at 12:00 p.m. in the breezeway adjacent to the CFTC’s Conference Center. Exhibitors will also continue to staff their exhibit tables through the remainder of the Conference.

Visit with representatives from the following regulators:

- ❖ Commodity Futures Trading Commission (CFTC)
- ❖ Commodity Futures Trading Commission Whistleblower’s Office (CFTC WBO)
- ❖ Consumer Financial Protection Bureau (CFPB)
- ❖ Federal Bureau of Investigation (FBI)
- ❖ Financial Industry Regulatory Authority (FINRA)
- ❖ National Futures Association (NFA)
- ❖ North American Securities Administrators Association (NASAA)
- ❖ Securities and Exchange Commission (SEC)

**Conference WiFi**

- ❖ Network: CFTCCNFWIFI
- ❖ Password: cftc2413!

**Conference Hashtag**

#FintechForward2019

**Notice of Filming and Photography**

Please be aware that by entering the conference area you consent to the recording of your name, voice, likeness and/or image, by any means including audiotape, videotape, and photograph, by the CFTC for any CFTC non-commercial purpose (“Recording”). You also agree to release the CFTC, its officers, and employees from any claims or liabilities in connection with the Recording, and you waive all rights you may have to compensation for use of the Recording. You also waive any right to inspect or approve the Recording.



**Summary  
Agenda**

8:00 – 9:30 a.m.	<b>Conference Registration Meet the Regulators</b>
9:30 – 9:35 a.m.	<b>Conference Welcome</b> Brian Trackman, LabCFTC
9:35 – 9:50 a.m.	<b>Opening Keynote</b> Chairman Heath P. Tarbert
9:50 – 10:35 a.m. <i>Panel</i>	<b>AI in the 21<sup>st</sup> Century Marketplace: Exploring the Role of AI and Related Fintech in CFTC Markets</b>
10:35 – 10:55 a.m. <i>Fireside Chat</i>	<b>Better Compliance Through Infrastructure Technology</b> Commissioner Dan Berkovitz featuring former Commissioner Mark Wetjen
10:55 – 11:10 a.m. <i>Tech Talk</i>	<b>The Future of Money: The Impact of Digitization, Including “Social Coins” on Currency, Payments and Markets</b> Tommaso Mancini-Griffoli, International Monetary Fund
11:10 – 11:55 a.m. <i>Panel</i>	<b>Re-Imagining Markets: What Digitization Means ... for Transactions, Custody, and Markets</b>
11:55 a.m. – 1:15 p.m.	<b>Lunch on your own</b> <i>Visit Meet the Regulators exhibit</i>
1:15 – 1:20 p.m.	<b>Welcome Back</b>
1:20 – 1:25 p.m. <i>Remarks</i>	<b>Past Guidance for a Clearer Future: How a Coordinated Framework Can Move Fintech Regulation Forward</b> Commissioner Rostin Behnam
1:25 – 1:40 p.m. <i>Tech Talk</i>	<b>Fintech and Innovation from an International Perspective</b> Nicole Sandler, Barclays



**Summary  
Agenda**

1:40 – 2:25 p.m.  
*Panel*

**Global Perspective: International Regulatory Approaches to Fintech -- Current Issues and New Developments**

2:25 – 2:40 p.m.  
*Tech Talk*

**Zero Trust Architecture**  
Scott Rose, National Institute of Standards and Technology

2:40 – 3:25 p.m.  
*Panel*

**Head in the Cloud(s): Opportunities and Challenges of Big Data and Cloud Computing**

3:25 – 3:40 p.m.

**Break**  
*Visit Meet the Regulators exhibit*

3:40 – 3:45 p.m.

**Welcome Back**

3:45 – 4:00 p.m.  
*Tech Talk*

**Data from Out of this World: Cubesats**  
Mark Carhart, Spire Global

4:00 – 4:20 p.m.  
*Fireside Chat*

**Commissioner Dawn Stump in Dialogue with New LabCFTC Director Melissa Netram**

4:20 – 4:35 p.m.  
*Tech Talk*

**Multiparty Computing**  
Alex Petric, inpher

4:35 – 5:20 p.m.  
*Panel*

**Building an AI-Inclusive Framework: Appropriate Rules of the Road and Safeguards**

5:20 – 5:25 p.m.

**Conference Closing Remarks**  
Melissa Netram, LabCFTC



8:00 – 9:30 a.m.	<b>Conference Registration Meet the Regulators</b>
9:30 – 9:35 a.m.	<b>Conference Welcome</b> Brian Trackman, LabCFTC
9:35 – 9:50 a.m.	<b>Opening Keynote</b> Chairman Heath P. Tarbert
9:50 – 10:35 a.m. <i>Panel</i>	<b>AI in the 21<sup>st</sup> Century Marketplace: Exploring the Role of AI and Related Fintech in CFTC Markets</b>

Moderator: Bianca Gomez, LabCFTC

Artificial intelligence (AI) has increasingly become a part of our everyday lives, from virtual assistants to navigation and driver assistance to music and movie suggestions. In the financial sphere, AI applications hold great promise and are already being deployed. Specific applications of AI include identity management, product selection, asset allocation and risk management, automated trading, and transaction reporting.

Given that AI is playing an increasing role in compliance efforts and market oversight, this panel will explore a range of AI use cases including self-executing contracts; automated markets; AI-driven reporting; machine readable rules; and automated smart reporting.

How will these AI and related technologies enhance trading, transparency, and market integrity? What applications of AI are most promising? Which could have the greatest impact? What new challenges does the integration of AI pose to market participants and regulators like the CFTC?

Panelists:

- Aaron Klein, Fellow - Economic Studies, Policy Director - Center on Regulation and Markets, Brookings
- Adam Zarazinski, Chief Executive Officer, Inca Digital Securities
- Gary DeWaal, Special Counsel, Chair, Financial Markets and Regulatory, Katten Muchin Rosenman LLP
- Dr. Sam Playle, Data Scientist, Kaizen Reporting



**Detailed  
Agenda**

10:35 – 10:55 a.m.  
*Fireside Chat*

**Better Compliance through Infrastructure  
Technology**

Commissioner Dan Berkovitz featuring former  
Commissioner Mark Wetjen, Managing Director  
and Head of Global Public Policy, DTCC

10:55 – 11:10 a.m.  
*Tech Talk*

**The Future of Money: The Impact of  
Digitization, Including “Social Coins” on  
Currency, Payments and Markets**

Tommaso Mancini-Griffoli, Deputy Division Chief  
in the Monetary and Capital Markets Department,  
International Monetary Fund

This presentation will examine the following questions: How will we pay for coffee in 5 years? Could we see the rapid adoption of new forms of money? What is “money” anyway? Money has specific attributes that we have come to understand intuitively. Those proposing to use new, digital money are seeking to emulate these characteristics. As digital tokens continue to develop, what features are most important? What challenges does digital currency raise for regulators? How should central banks respond? Should they offer their own digital means of payment to the public—a sort of digital cash—or should they limit themselves to regulating the new entrants?



11:10 – 11:55 a.m.  
*Panel*

**Re-Imagining Markets: What Digitization Means ... for Transactions, Custody, and Markets**

Moderator: Jorge Herrada, LabCFTC

Digital money is already becoming the new reality. Value can now be transferred virtually, in practically real-time. Payments worldwide are being upended by models such as PayTM in India, M-Pesa in Kenya, and Venmo in the US. Efforts to digitize assets are also underway. Where are we headed?

This panel will consider the future of money and alternative means of exchange.

What are the impacts that the rise of digital assets may have on current market structure? What should we make of new proposals for “social coins” and sovereign-linked tokens? What are the impacts of stablecoins on fiat currency? Does digitization blur the line between “money” and “commodity”? What is the impact of derivatives on crypto assets? As digitization progresses, new models are being explored. What are these? What about custody? What impact will new entrants in custody insurance have on the maturing of custody models? Are trusted custody solutions the final stumbling block for mass adoption of digital assets in the institutional markets? What role does a regulator such as CFTC play in assuring custody?

Panelists:

- Alex Levine, General Counsel and Chief Compliance Officer, Pangea Money Transfer
- Joshua Ashley Klayman, U.S. Head of FinTech and Head of Blockchain and Digital Assets, Linklaters
- Kelly Loeffler, Chief Executive Officer, Bakkt
- Tommaso Mancini-Griffoli, Deputy Division Chief in the Monetary and Capital Markets Department, International Monetary Fund

11:55 a.m. – 1:15 p.m.

**Lunch on your own**  
*Visit Meet the Regulators exhibit*

1:15 – 1:20 p.m.

**Welcome Back**





1:20 – 1:25 p.m.  
*Remarks*

**Past Guidance for a Clearer Future: How a Coordinated Framework Can Move Fintech Regulation Forward**  
Commissioner Rostin Behnam

1:25 – 1:40 p.m.  
*Tech Talk*

**Fintech and Innovation from an International Perspective**  
Nicole Sandler, Innovation Global Policy Lead,  
Barclays

Technologies such as AI and distributed ledger bring new opportunities but also regulatory challenges. This presentation will consider what policymakers and the industry can learn from other jurisdictions.

1:40 – 2:25 p.m.  
*Panel*

**Global Perspective: International Regulatory Approaches to Fintech, Current Issues and New Developments**

Moderator: Kevin Piccoli, Office of International Affairs, CFTC

There has been a surge in fintech development worldwide. This panel will draw from regulatory experts around the world to share insights they have gathered while regulating and observing widespread changes in their financial markets.

This panel will explore the impact that fintech has had on various regulatory schemes and how regulators are evaluating their existing regulations to deal with emerging technologies. The panel will also discuss ways in which regulators are approaching crypto asset oversight.

How are international regulators approaching fintech? What developments are most noteworthy? Which are most likely to have a lasting impact?

Panelists:

- Jason Mahoney, Office of International Affairs, CFTC
- Laura Navaratnam, Manager, Innovate - Policy & Engagement at Financial Conduct Authority, Innovation Hub at U.K. Financial Conduct Authority (FCA)
- Luciano Brincat, Senior Analyst, FinTech, Malta Financial Services Authority (MFSA)
- Magdalena Borowik, Fintech Director, Polish Financial Supervision Authority



**Detailed  
Agenda**

2:25 – 2:40 p.m.  
*Tech Talk*

**Zero Trust Architecture**

Scott Rose, Computer Scientist, Lead Author, National Institute of Standards and Technology Information Technology Lab

Zero Trust Architecture (ZTA) refers to architecting computer networks in a way that prevents common and advanced persistent threats from spreading inside a network. ZTA is a response to enterprise network trends that include remote users and cloud-based assets not located within an enterprise-owned network boundary. In this presentation, Scott Rose, the first author of the recent NIST draft publication on this topic, will present key learnings and case studies. Scott will address why ZTA is so important for cybersecurity, and explain how ZTA can decrease cyber incidents while increasing workforce productivity.

2:40 – 3:25 p.m.  
*Panel*

**Head in the Cloud(s): Opportunities and Challenges of Big Data and Cloud Computing**

Moderator: Ed Wehner, Associate Director of Data Engineering and Processing, Office of Data and Technology, CFTC

The new era of big data and the rise of Cloud computing have converged. Their impact is being felt across the economy, including the financial sector. Big data is the fuel AI needs to train. New sources of data and larger data sets can provide greater insight, leading to more tailored products, risk management, and market analysis. Cloud computing allows for flexibility and elastic computing power necessary to harness big data.

This panel will explore the interplay of these trends and how big data and the Cloud can enhance our markets, as well as potential risks. For example, the CFTC does not directly oversee third party service providers. Does the growth of data and the Cloud providers and users warrant new approaches?

What is possible now that was not possible before the advent of cloud computing? What is the intersection of AI and the Cloud, and what is the future for financial markets and financial institutions? What should financial regulators be worried about? How is data safeguarded? Who is responsible for security and access to such data?

Panelists:

- Caroline Pham, Director and Head of Markets Regulatory Implementation, Citi
- John Crouch, Founder, Ideal Prediction
- Kari Larsen, Partner, Perkins Coie LLP
- Rich Piña, Principal Architect, Google Cloud



**Detailed  
Agenda**

3:25 – 3:40 p.m.

**Break**

*Visit Meet the Regulators Exhibit*

3:40 – 3:45 p.m.

**Welcome Back**

3:45 – 4:00 p.m.

*Tech Talk*

**Data from Out of this World: Cubesats**

Presenter: Mark Carhart, Director, Program Sales,  
Spire Global

In this presentation, Mark will present on cubesats and their potential to enable better predictions with impacts across economic sectors, including agriculture, transportation, and energy. Spire Global is active in this area and Mark will describe how this new network of low earth orbit satellites is developing.

4:00 – 4:20 p.m.

*Fireside Chat*

**Commissioner Dawn Stump in Dialogue with  
New LabCFTC Director Melissa Netram**

4:20 – 4:35 p.m.

*Tech Talk*

**Multiparty Computing**

Alex Petric, VP of Solutions, inpher

This presentation will explore multiparty computation (MPC), a cryptographic protocol that distributes a computation across multiple parties where no individual party can see the other parties' data. With MPC, data scientists are able to compliantly, securely, and privately compute on distributed data without ever exposing or moving it. Inpher's Alex Petric will explain the fundamentals of MPC, and how public and private organizations should start leveraging it today.



4:35 – 5:20 p.m.  
*Panel*

**Building an AI-Inclusive Framework:  
Appropriate Rules of the Road and Safeguards**

Moderator: Brian Trackman, LabCFTC

AI has tremendous potential. But to realize its potential, an appropriate framework is necessary, including design processes, system governance, and accountability. For example, while accountability is a key element of good system governance, applications of AI can challenge traditional understandings of and approaches to accountability. If an AI-powered trading algorithm or reporting system goes rogue, who is responsible? The user? The service provider? The developer? Developing safeguards, good governance, and accountability into AI frameworks will help to minimize detrimental effects.

This panel will identify key cornerstones of such a framework to support the responsible development, implementation, and use of AI. This panel will consider different types of frameworks and the role regulators like the CFTC can play to promote responsible innovation generally and AI in particular.

How can we promote the development of AI systems that add value and enhance our markets? What can we do to mitigate the risk that AI systems learn to be biased based on skewed training sets? What types of oversight are needed? Should “explainability” be a system requirement? What about security, resilience, and back-ups?

- Amy Walraven, Founder, Turn Key / Humaitrix
- Combiz Abdolrahimi, Emerging Technology & Innovation Leader, Government & Public Services (GPS), Deloitte LLP
- Dr. David Mordecai, Visiting Scholar at Courant Institute of Mathematical Sciences at New York University (NYU); Lead investigator at the RiskEcon® Lab for Decision Metrics; Co-Founder, Risk Economics, Inc., NYU
- Samuel G. Kramer, Partner, Baker & McKenzie LLP

5:20 – 5:25 p.m.

**Conference Closing Remarks**  
Melissa Netram, LabCFTC



## Commission Leadership

### Chairman Heath P. Tarbert



Chairman Heath P. Tarbert is Chairman and Chief Executive of the U.S. Commodity Futures Trading Commission (CFTC). He was nominated for a term expiring on April 13, 2024 and took office on July 15, 2019. The mission of the CFTC is to strengthen the American free-enterprise system by ensuring the integrity of the futures, swaps, and options markets by fostering openness, transparency, competitiveness, innovation, and financial stability. The agency’s approximately 700 personnel based in Chicago, Kansas City, New York, and Washington, DC also work to ensure the U.S. commodities and derivatives markets are free of fraud and manipulation. Chairman Tarbert also serves as a voting member of the Financial Stability Oversight Council (FSOC) and as a member of the President's Working Group on Financial Markets.

Chairman Tarbert has extensive experience in financial services law and has served in senior leadership roles in the public and private sector. Most recently, he served as Assistant Secretary for International Markets and subsequently as acting Under Secretary for International Affairs at the U.S. Department of the Treasury. In these roles, Chairman Tarbert served as the G-7/G-20 Deputy Finance Minister, a member of the Financial Stability Board, and the co-chair of both the US-EU Financial Regulatory Forum and the US-UK Financial Regulatory Working Group. Prior to his service at the Treasury Department, Chairman Tarbert was head of the bank regulatory practice of Allen & Overy LLP, a leading global law firm.

### Commissioner Rostin Behnam



Rostin Behnam was nominated by President Trump as a Commissioner of the U.S. Commodity Futures Trading Commission on July 13, 2017, was unanimously confirmed by the Senate on August 3, 2017, and was sworn in to serve as a Commissioner on September 6, 2017, for a term expiring in June 2021. Prior to joining the CFTC and since 2011, Commissioner Behnam served as senior counsel to U.S. Senator Debbie Stabenow of Michigan, Ranking Member of the Agriculture, Nutrition, and Forestry Committee. Commissioner Behnam’s focus while in Senator Stabenow’s office was on policy and legislation related to the CFTC and the Department of Agriculture. Commissioner Behnam practiced law in New York City and worked at the New Jersey Office of the Attorney General. He is a graduate of Georgetown University and earned a J.D. from the Syracuse University College of Law.



**Commissioner Dawn DeBerry Stump**



Dawn DeBerry Stump was nominated by President Trump to serve as a Commissioner of the Commodity Trading Commission on June 12, 2017. She was unanimously confirmed by the Senate on August 28, 2018, and sworn into office on September 5, 2018, for the remainder of a five-year term expiring in April 2022. Prior to her appointment, Commissioner Stump was President of Stump Strategic, a consulting firm she founded in 2016. Before starting her firm, Commissioner Stump was Executive Director and Senior Vice President of U.S. Policy for the Futures Industry Association (FIA) and Vice President at the New York Stock Exchange. During much of her career, she also served the public sector in staff positions in both the U.S. Senate and House of Representatives, including six years at the Senate Committee on Agriculture, Nutrition and Forestry where she focused on various farm policy, rural development, and renewable energy matters as well as oversight of the CFTC. While serving in both Congressional houses, she participated in negotiations of two farm bills, CFTC reauthorization, and the Dodd-Frank Act. Commissioner Stump is from Olton, Texas, and grew up working in the agricultural sector. She holds a Bachelor of Science in Agricultural and Applied Economics degree from Texas Tech University. She is married and has two children.

**Commissioner Dan M. Berkovitz**



Dan M. Berkovitz was nominated by President Trump to serve as a Commissioner of the Commodity Futures Trading Commission on April 24, 2018. He was unanimously confirmed by the Senate on August 28, 2018, and sworn into office on September 7, 2018, for a five-year term expiring in April 2023. He leads the Technology Advisory Committee for the CFTC. Prior to his appointment, Commissioner Berkovitz was a partner and co-chair of the futures and derivatives practice at the law firm of WilmerHale. He also was an Adjunct Professor at Georgetown University Law School, and vice-chair of the American Bar Association Committee on Futures and Derivatives. Commissioner Berkovitz served as General Counsel of the CFTC from 2009-2013. While serving in this role, he was the agency’s Deputy Representative to the Financial Stability Oversight Council (FSOC). Before the CFTC, he was a senior staff lawyer for the U.S. Senate Permanent Subcommittee on Investigations. He also served as Deputy Assistant Secretary in the Department of Energy’s Office of Environmental Management. Commissioner Berkovitz obtained an A.B. in Physics from Princeton University and a J.D. from the University of California, Hastings College of the Law. He is married to Michelle and they have two children, Zoe and Eli.



**Featured Speakers (in order of appearance)**

**Panel 1: AI in the 21<sup>st</sup> Century Marketplace: Exploring the Role of AI and Related Fintech in CFTC Markets**

**Moderator: Bianca M. Gomez, Counsel for LabCFTC, CFTC**



Bianca M. Gomez is Counsel for LabCFTC and Counsel on FinTech and Innovation to the Office of General Counsel. She joined the CFTC in 2015 as Counsel and served as a Deputy Ethics Official. Ms. Gomez previously held similar roles as an attorney and ethics official at the Federal Election Commission and the U.S. Election Assistance Commission. Ms. Gomez is a graduate of Boston College and earned her J.D. from the University of North Carolina at Chapel Hill School of Law.

**Aaron Klein, Fellow - Economic Studies, Policy Director - Center on Regulation and Markets, Brookings**



Aaron Klein is a fellow in Economic Studies and serves as policy director of the Center on Regulation and Markets. He focuses on financial regulation and technology, macroeconomics, and infrastructure finance and policy. Previously, Klein directed the Bipartisan Policy Center’s Financial Regulatory Reform Initiative and served at the Treasury Department as deputy assistant secretary for economic policy from 2009 through 2012. He worked on financial regulatory reform issues including crafting and helping secure passage of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. Prior to his appointment as deputy assistant secretary in 2009, he served as Chief Economist of the Senate Banking, Housing and Urban Affairs Committee for Chairmen Chris Dodd (D-CT) and Paul Sarbanes (D-MD). During his 8+ years on the Committee, he worked on numerous pieces of legislation include the Emergency Economic Stabilization Act (better known as TARP), the Housing and Economic Recovery Act, the Terrorism Risk Insurance Act, the Check 21 Act, the SAFETEA Act, and the Sarbanes-Oxley Act. Klein is a graduate of Dartmouth College and Princeton University. He lives in his hometown of Silver Spring Maryland, with his wife and two young daughters.



**Adam Zarazinski, Chief Executive Officer, Inca Digital Securities**



Adam Zarazinski is the CEO of Inca Digital, a digital asset data aggregation and analytics provider for enterprises. He is a former active duty USAF Judge Advocate, where he was a supervisory prosecutor at Joint Base Andrews, and operations law attorney in Afghanistan. He has managed and developed projects around new technology for international organizations like INTERPOL and the World Health Organization. When not working, Adam enjoys practicing Brazilian Jiu-Jitsu. One time he rolled with Relson Gracie in Brazil. He lost.

**Gary DeWaal, Special Counsel, Chair, Financial Markets and Regulatory, Katten Muchin Rosenman LLP**



Gary DeWaal brings substantial experience from both industry and government to his practice counseling clients on exchange-traded derivatives and cryptoassets. He advises a worldwide client base on transactional and regulatory matters relating to those and other complex financial products. Gary's clients benefit from his deep well of contacts and practical knowledge from his prior work with the world's largest exchange-traded derivatives broker and, before that, as a senior trial attorney at the CFTC.

**Dr. Sam Playle, Data Scientist, Kaizen Reporting**



Dr. Sam Playle is a Data Scientist at Kaizen Reporting, a multi-award winning UK-based RegTech firm. Kaizen has combined regulatory expertise with advanced technology to develop its quality assurance services which provide visibility of the quality of regulatory reporting for Dodd-Frank compliance and other global regulations. Kaizen's services have won a Queen's Award for Innovation, one of the UK's highest business accolades. Playle came to Data Science from a Theoretical Physics background. He now uses state-of-the-art machine learning technologies to develop AI solutions for streamlining and accelerating the Kaizen Reporting ReportShield™ pipeline. He is currently developing systems to help firms comply with their regulatory obligations beyond the reporting sphere.





**Fireside Chat: Better Compliance through Infrastructure Technology**

**Mark Wetjen, Managing Director and Head of Global Public Policy, DTCC**



Mark Wetjen is Managing Director, Head of Global Public Policy, DTCC, with responsibility for developing and coordinating strategic engagement to help shape policymaking that impacts DTCC’s interests around the world. He is also Chairman of the Board, DTCC Deriv/SERV LLC. Prior to joining DTCC, Mark served as a Commissioner at the CFTC. Mark is also a Board Member of LedgerX, as well as an Advisory Board Member of Coin Center and the Chamber of Digital Commerce.

**Tech Talk: The Future of Money: The Impact of Digitization, including “social coins” on Currency, Payments and Markets**

**Tommaso Mancini-Griffoli, Deputy Division Chief in the Monetary and Capital Markets Department, International Monetary Fund**



Tommaso Mancini-Griffoli is a Deputy Division Chief in the Monetary and Capital Markets Department at the International Monetary Fund (IMF), focused on monetary policy, central banking, and fintech. He has advised country authorities and published on issues related to unconventional monetary policies, monetary policy and financial stability, spillovers, exchange rate regimes and interventions, modelling and forecasting, evolving monetary policy frameworks, as well as fintech and digital currencies. Prior to joining the IMF, Mancini-Griffoli was a senior economist in the Research and Monetary Policy Division of the Swiss National Bank, where he advised the Board on quarterly monetary policy decisions. Mancini-Griffoli served in the private sector, at Goldman Sachs, the Boston Consulting Group, and technology startups in the Silicon Valley. He holds a PhD from the Graduate Institute in Geneva, and prior degrees from the London School of Economics and Stanford University



**Panel 2: The Future of Money: The Impact of Digitization, including “social coins” on Currency, Payments and Markets**

**Moderator: Jorge Herrada, Tech Lead, LabCFTC, CFTC**



Jorge Herrada focuses on innovation, advanced technology, analytics, finance, DLT, and crypto currencies. Herrada is active in CFTC’s FinTech Interdivisional Working Group, the CFTC’s Technology Advisory Committee, and FSOC. Herrada previously was a Senior Principal at American Management Systems (now CGI) designing and developing innovative Information Technology solutions. Herrada earned an MBA from the University of Chicago, an MS from the London School of Economics, and a BS from Shippensburg University of Pennsylvania.

**Alex Levine, General Counsel and Chief Compliance Officer, Pangea Money Transfer**



Alex C. Levine has spent more than 15 years as an attorney and legal executive focused on the practice of regulatory, securities, and derivatives law. He has been deeply involved in providing strategic guidance and establishing regulatory frameworks to a number of blockchain and cryptocurrency companies, including in his current role as General Counsel & Chief Compliance Officer at Pangea, a global fintech company looking to bring banking and financial services to those underserved by the current marketplace via cryptocurrency, blockchain, and other innovations. Levine has also held positions as Chief Regulatory Officer & Head of Legal at TrustToken, which created the first regulatory-compliant stablecoin tied to the US dollar and other currencies, and Head of Legal & Chief Compliance Officer at LedgerX, the first federally-authorized exchange and clearinghouse for bitcoin derivatives. He previously served in senior roles at the SEC and CFTC. He obtained his J.D. from Stanford University Law School and has received an M.B.A. and a B.A. in Economics & Politics from Oberlin College.



**Joshua Ashley Klayman, U.S. Head of FinTech and Head of Blockchain and Digital Assets, Linklaters**



Joshua Ashley Klayman is one of the most well known Blockchain and Cryptocurrency lawyers in the world. Recognized by Chambers and Partners as one of only 3 “Band 1”-ranked U.S. Blockchain & Cryptocurrency lawyers for 2019, Klayman also is one of the original top 12 global Blockchain & Cryptocurrency lawyers ranked by Chambers in its inaugural 2018 list. She is founder and CEO of Klayman LLC, a boutique blockchain law firm, and Inflection Point Blockchain Advisors, LLC, a blockchain strategy consulting and advisory firm. She chairs the prominent Wall Street Blockchain Alliance (“WSBA”) Legal Working Group and serves on the WSBA’s Board of Directors. A recognized thought leader in the blockchain space, Klayman also is a Forbes Contributor for blockchain and crypto matters and is a member of the global Wharton Reg@Tech think tank. In 2019, Modern Consensus named her #89 on its list of the 100 Most Influential People in Crypto. Passionate about the advancement of women and other diverse groups, Klayman is a co-founder of Diversity in Blockchain, Inc. and a founding member of Collective Future.

**Kelly Loeffler, Chief Executive Officer, Bakkt**



Kelly Loeffler is CEO of Bakkt, subsidiary of Intercontinental Exchange (NYSE: ICE). Bakkt is enabling institutional, merchant and consumer access to digital assets in a secure, trusted ecosystem. As CEO, she is responsible for establishing the strategy and team, as well as the regulatory, financial and operational performance of the company. She is a member of ICE’s Executive Management Committee. Loeffler joined Intercontinental Exchange in 2002 where she built and led investor relations, corporate communications and marketing for over 15 years. With more than two decades’ experience in financial services, Loeffler previously held roles in equity research at William Blair & Company and Citi Global Asset Management. Loeffler began her career in the automotive industry, holding marketing and operations roles at Toyota Motor Sales, USA. Loeffler earned a Bachelor of Science in Business Administration degree from the University of Illinois at Urbana-Champaign and completed a Master of Business Administration from DePaul University’s Kellstadt Graduate School of Business. She is a CFA charterholder.

**Tommaso Mancini-Griffoli, Deputy Division Chief in the Monetary and Capital Markets Department, International Monetary Fund**

See prior biography.



**Tech Talk: Fintech and Innovation from an International Perspective**

**Nicole Sandler, Innovation Global Policy Lead, Barclays**



Nicole Sandler leads on Innovation Policy at Barclays. She focuses on the impact of FinTech related regulation and initiatives including DLT, Crypto-assets and AI use cases on Barclays in the UK and globally, such as advising on various sandbox and regulatory initiatives proposed by regulators and policymakers including the Financial Conduct Authority (FCA), Bank of England (BoE), European Commission (EC), European Banking Authority (EBA), US Federal Reserve, CFTC,

Monetary Authority of Singapore and Japanese FSA. Sandler regularly speaks on panels, presents at conferences and universities and has articles published. She was recently named ‘Influencer of the Year’ at the NY Finovate Awards 2019, the ‘Most Influential Women in Fintech Regulation - UK’ at the Wealth and Finance Awards 2019, was shortlisted as a finalist in the ‘Fintech Champion’ category at the Women in Finance Awards 2019 and the ‘Women in PayTech’ category at the PayTech Awards 2019. She also focuses on diversity initiatives including being a board member of Regtech Women an initiative she helped set up to promote RegTech and provide a network amongst women in this space.

**Panel 3: Global Perspective: International Regulatory Approaches to Fintech, Current Issues and New Developments**

**Moderator: Kevin Piccoli, Deputy Director, Office of International Affairs, CFTC**



Kevin Piccoli is currently Deputy Director in the Office of International Affairs at the CFTC where he is responsible for the CFTC’s international technical assistance program. In this role, Piccoli has provided assistance to developed and developing countries including providing technical support to assist in the creation of a commodities market, evaluating regulatory schemes, and providing specialized and customized training and keynote speeches at conferences. Piccoli is also the CFTC’s representative on the International Organization of Securities

Commissions (IOSCO) Asset Management Committee focused on setting global regulatory standards for the asset management industry. Prior to this assignment, he was the Deputy Director, Examinations in the Division of Swap Dealer and Intermediary Oversight. Prior to joining the CFTC, Piccoli was the CFO at a number of Wall Street institutions, including Tradeweb, Cantor Fitzgerald, eSpeed and Greenwich Capital Markets. He was also Chief Auditor at The Bank of New York Mellon. Kevin started his career at Coopers & Lybrand (now PricewaterhouseCoopers) and became a partner in their financial services group and Co-Head of the Firm’s Derivative Products Practice.



**Jason Mahoney, Special Counsel, Office of International Affairs, CFTC**



Jason Mahoney is Special Counsel in the CFTC’s Office of International Affairs where he advises the CFTC on international financial regulatory matters, including matters focused on cyber security and crypto assets. Mahoney represents the Commission in various multilateral fora including IOSCO, the Financial Stability Board, and the Financial Stability Oversight Counsel. Mahoney joined the CFTC in August 2009 as a Trial Attorney in the CFTC’s Enforcement Division where he served as lead counsel on numerous cases involving fraud, manipulation, and other conduct in violation of

the Commodity Exchange Act. Prior to joining the CFTC, Mahoney worked for corporate defense firms including Hunton & Williams, LLP. Mahoney received his Juris Doctor degree from the University of Pittsburgh and his Bachelor of Arts from Colby College.

**Laura Navaratnam, Manager, Innovate - Policy & Engagement at Financial Conduct Authority, Innovation Hub at Financial Conduct Authority (FCA)**



Laura Navaratnam leads the policy and engagement team within the FCA’s innovation division. This team is responsible for developing policy responses to new technology, such as Cryptoassets and DLT. The team also leads the FCA’s international FinTech work program including the Global

Financial Innovation Network. Before this role, she led a number of other FCA teams within Policy and Strategy. Before joining the FCA, Navaratnam worked at EY as a management consultant.

**Luciano Brincat, Senior Analyst, FinTech, Malta Financial Services Authority (MFSA)**



Luciano Brincat is a Senior Manager within the FinTech and Innovation function of the Malta Financial Services Authority (MFSA), focusing his efforts on the implementation of the MFSA’s FinTech Strategy and Virtual Financial Assets Framework. Brincat graduated from the University of Malta in 2011 with a Bachelor of Commerce Honours degree majoring in Economics and subsequently in 2017 with a Master of Science

degree in Banking and Finance. He has a keen interest in technology-enabled transformation within the financial services sector, as well as the regulatory and supervisory considerations brought about by such financial innovation.



**Magdalena Borowik, Fintech Director, Polish Financial Supervision Authority**



Magdalena Borowik is a fintech strategist at the Polish Financial Supervision Authority, specializing in complex business transformation projects based on data and technology. She has experience on technological risk and innovation management in data management, digital identity and trust services, telecom networks and critical infrastructure, government and finance.

**Tech Talk: Zero Trust Architecture**

**Scott Rose, Computer Scientist, Lead Author, National Institute of Standards and Technology Information Technology Lab**



Scott Rose works as a computer scientist at the National Institute for Standards and Technology (NIST). Rose works on Internet infrastructure protection research and Internet protocol research and is the editor of several IETF specifications and the author of several NIST Special Publications on secure Internet protocols. His current work is in bringing zero trust security understanding to the US Government. Rose holds BA and MS degrees in Computer Science.

**Panel 4: Head in the Cloud(s): Opportunities and Challenges of Big Data and Cloud Computing**

**Moderator: Ed Wehner, Associate Director of Data Engineering and Processing, Office of Data and Technology, CFTC**



Ed Wehner is the Associate Director for Data Engineering and Processing at the CFTC, and manages the team that runs the data ingest activities and their databases at the CFTC. Additionally, Wehner is leading the team that is implementing the CFTC's Order Book initiative. This will result in analysts having routine access to data sets related to Order Book analysis from the AWS Cloud – a first for the CFTC. Prior to joining the CFTC in 2010, he spent 29 years as Software developer and Program Management consultant at many Federal agencies including the National Weather Service, Bureau of Economic Analysis, DOD, DIA, Veterans Affairs, FBI, NSA, and the IRS. Wehner has a BS of CS from George Mason University, a MS in Technology Management from George Mason, and a CIO/Technology management Degree from the GSA's CIO University.



**Caroline Pham, Director and Head of Markets Regulatory Implementation, Citi**



Caroline D. Pham is Deputy Head of Global Regulatory Affairs at Citi. She partners with Global Government Affairs to drive Citi’s advocacy efforts across all businesses and regions, and informs and integrates views on the strategic and practical implications of regulatory and supervisory policy in support of Citi’s franchise, clients and customers. Pham covers emerging issues such as FinTech, blockchain/ distributed ledger technology, and digital assets. Previously, she joined Citi in 2014 to start the Markets Regulatory Implementation team. Prior to joining Citi, Pham practiced law in Washington, DC, most recently serving as Special Counsel and Policy Advisor to former CFTC Commissioner Scott O’Malia. She was also a Visiting Fellow at the George Washington University Center for Law, Economics and Finance. She holds a BA from UCLA and a JD from the George Washington University Law School.

**John Crouch, Founder, Ideal Prediction**



John Crouch founded Ideal Prediction to bring practical data science solutions to financial markets. His 20 years of trading experience is balanced: large banks and small HFTs, managing sell-side desks and proprietary trading groups, voice and fully-automated execution, and across many liquid FICC products. He has an S.B. and a M.Eng from MIT in EECS and an M.S. in mathematics from NYU. His free time is focused on family, in addition to serving on the board of Broadway Technology.

**Kari Larsen, Partner, Perkins Coie LLP**



Perkins Coie LLP New York Partner, Kari Larsen, has extensive international experience in building businesses and managing global commercial, legal, and compliance risks. For almost 20 years, Larsen has represented clients in US and EU regulatory, legislative, risk management, and transactional matters with a particular focus on cryptocurrencies, digital assets, energy, agricultural and environmental commodities and derivatives. She is considered a leading strategic advisor to businesses regarding the development of profitable inventive financial products and platforms, including FinTech / RegTech innovations, Blockchain networks, and digital commodities, while navigating complex regulatory regimes. Larsen is regularly invited to speak at conferences, most notably, for FinTech/RegTech, digital assets and Blockchain solutions.



**Rich Piña, Principal Architect, Google Cloud**



Rich Piña is a senior member of the Google Cloud team. He has over twenty years of solution design and delivery experience in the banking, capital markets, wealth management, insurance and media sectors. A business project leadership and execution, academic learning, and research-based career that has spanned industry invention, hardware design, application development, systems integration and infrastructure engineering. He holds a BS from Manhattan College, a MS from Columbia University, and New York University PhD (ABD) in Technology Management.

**Tech Talk: Data from Out of this World: Cubesats**

**Mark Carhart, Director, Program Sales, Spire Global**



Mark Carhart has been at Spire Global for over a year and half. He started his career as an Army Corps of Engineers Officer serving worldwide before moving to Industry. In industry, Carhart has had Program Management Roles at ERDAS and Leica Geosystems Supporting the National Geospatial-Intelligence Agency's Soft Copy Search Program. He has been an sales executive supporting a wide variety of mission critical

Intelligence Community and DoD programs at Silicon Graphics, Dell EMC, and Palo Alto Networks. Carhart earned a B.S. in Civil Engineering from West Point and MSc in Defense Geographic Information from Cranfield University.

**Fireside Chat: Commissioner Dawn Stump in dialogue with New LabCFTC Director Melissa Netram**

**Melissa Netram, Director, LabCFTC, CFTC**



Melissa Netram recently began as the Director of LabCFTC. Prior to the CFTC, Melissa worked for 9 ½ years in Intuit’s Corporate Affairs department, responsible for working closely with the business teams to ensure the government strategy aligns closely with their business strategy. She focused on technology, cybersecurity, small business and financial services policy issues around the globe. She was one of the founding members of the Financial Innovation Now Coalition, one of the first fintech coalitions in the DC area. Prior to Intuit, Netram worked at the Financial Services Roundtable as VP and Regulatory Counsel, working on legislative and regulatory issues affecting the

financial services industry, including the legislative strategy on the Dodd-Frank Act. Netram received a J.D. from The Catholic University of America, Columbus School of Law and a Bachelor of Science in Business Administration from Villanova University.





**Tech Talk: Multiparty Computing**

**Alex Petric, VP of Solutions, inpher**



Alex Petric is a CISSP certified IT Security professional leading the customer success and solutions team at Inpher, providing technical expertise for both the Inpher sales team, prospective and current customers. He is responsible for proposing, designing and delivering technical solutions and has an active role in developing and designing the product. During his Masters thesis at the Swiss Federal Institute of Technology (EPFL), he developed a side channel attack resistant implementation of Elliptic Curve Cryptography on JavaCard based smart cards. After his studies, he began working as a Technical Account Manager for Open Systems, the largest Swiss provider for managed security services. He was overseeing the deployment of large scale security solutions and developed a deep understanding of security architecture.

**Panel 5: Building an AI-Inclusive Framework: Appropriate Rules of the Road and Safeguards**

**Moderator: Brian Trackman, Attorney Lead, LabCFTC, CFTC**



Brian Trackman joined the CFTC in 2013. Trackman has a longstanding interest in law and technology and advises on a wide range of FinTech issues. He serves as a senior member of the FinTech Interdivisional Working Group. Prior to joining the CFTC, Trackman worked at the Securities and Exchange Commission, where he focused on review of novel derivative securities products, market structure reform, and the oversight of alternative trading systems. Trackman earned a J.D. from Harvard Law School and B.A. from Amherst College.

**Amy Walraven, Founder, Turn Key / Humatrix**



Amy Walraven is the President, Chief Strategy Officer and Founder of Humatrix. With more than twenty years of expertise identifying, assessing, targeting, and resolving fraud and credit risk issues, she has pioneered advancements in the detection of first party fraud schemes including credit bust outs, synthetic identities, and organized syndicated fraud activity. A career risk manager, Walraven has developed and implemented business practices, scoring models, and clustering algorithms to detect organized fraudulent activity at every point of customer engagement. Her next generation solutions have helped mitigate identity risk throughout the customer lifecycle and are leveraged to enhance compliance while minimizing customer friction.



**Combiz Abdolrahimi, Emerging Technology & Innovation Leader, Government & Public Services (GPS), Deloitte LLP**



Combiz Abdolrahimi is a national security lawyer; Emerging Technology and Innovation Leader at Deloitte Consulting in the Government & Public Services practice; a former regulator & policymaker; and has served across government at the U.S. Departments of State, Treasury, The White House and Senate with over 13 years of experience shaping the business, policy, legal, regulatory, ethical & technical dimensions of artificial intelligence and machine learning; blockchain and DLT; cloud computing and big data; banking and payments; crypto assets and digital fiat currency; cybersecurity and identity. Combiz is a recipient of the FCW Rising Stars Award which recognizes the top 20 government IT innovators and emerging leaders; a member of the iLEAD Council, made up of distinguished professionals in the data science field; and he serves on numerous boards including the Federal Identity Forum & Expo; AFCEA; Kiwanis International; and American Council for Technology (ACT) & Industry Advisory Council (IAC).

**Dr. David Mordecai, Visiting Scholar at Courant Institute of Mathematical Sciences at New York University (NYU); Lead investigator at the RiskEcon® Lab for Decision Metrics; Co-Founder, Risk Economics, Inc., NYU**



David K.A. Mordecai, PhD is lead investigator at the RiskEcon® Lab for Decision Metrics, established in 2011, Visiting Scholar at Courant Institute of Mathematical Sciences at New York University (NYU) and Co-Managing Member of

Numerati Partners, LLC, an R&D ecosystem manager. He has served as an adjunct instructor of applied mathematics at Courant, as well as an Adjunct Professor and an active member of the working group for the NYU Center for Data Science (NYUCDS) at its inception. He has been a Fellow and a member of the Advisory Board of the Mathematical Finance program at Courant. Since 2013, he has served as the first Scientist-in-Residence at FinTech Innovation Lab, an accelerator platform for early and growth stage technology firms, organized by The Partnership Fund for New York City in conjunction with Accenture and a consortium of venture capital firms and global financial institutions. He is a member of the Board of Governors for the New York Academy of Sciences, and a Vice-Chair of both the AI and Robotics Law committee and the Nanotechnology committee of the ABA Sci-Tech Chapter. He earned a Ph.D. with concentrations in Econometrics/Mathematical Statistics and Economics/Industrial Organization from the University of Chicago, and an M.B.A. in Finance from NYU Stern School of Business.



**Samuel G. Kramer, Partner, Baker & McKenzie LLP**

Sam Kramer is a partner in Baker McKenzie's Chicago office in the IP Tech practice group. He is Chair of the Firm's North American FinTech practice and is a Member of the Firm's Global FinTech Steering Committee. Kramer represents customers in managed services, IT procurement, complex licensing, and supply chain agreements, with a focus on financial services. He is a frequent author and speaker on outsourcing, cloud services and blockchain. Kramer is recognized in Chambers Global, Chambers USA, the Legal 500 USA and Who's Who Legal. He is an adjunct faculty member in the Information Technology LLM Program at The John Marshall Law School where he has taught Cyberspace Law.

